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A. LIAUTARD, M. D. V. S., Editor.

ASSISTED BY

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AMERICAN VETERINARY REVIEW,

MAY, 1877.

ORIGINAL ARTICLES.

OSTEO POROSIS,

By John Myers, V. S., of Cincinnati, Ohio.

Osteo Porosis is the term of a disease which experience has proven to exist in solipeds of both sexes, and fall the victim thereof at their best period of life (from third to fifteenth year). It is characterized by a partial enlargement "Hypertrophy" of either upper or lower jaw, very often both. It is extensively considered that this abnormal condition of the head is a local affection and treated as such, or regarded as incurable and left to nature.

Etiology. There seems to be a difference of opinion as to its origin; however, climate and locality undoubtedly have a remarkable influence. The West and South-west of North America, and as I perceive, Canada are the districts especially favorable for its development, whilst in the East, it is but very little known. The damp and ill-ventilated stables are the principal generators of this disease. But very few cases have come under my observation, from the country, and with the exception of the summer following the Epizootic, only in the winter; for this reason I believe I may attribute the production of this disease to the *moist and changeable atmosphere*, in which the functions of the skin are manifold detrimentally affected; and moreover, when tracing the history of the case, it is generally found that the animal was subjected to some recent unaccustomed exertion during which

he freely perspired. Notwithstanding that such communications are sometimes unreliable, still I must corroborate this mode of genesis, as it at one time occurred to myself in the same manner, and I have positive reasons to accept this as a foundation, for such events often give an impulse to the production of the disease. Horses of nobler origin are seemingly less attacked by this malady; experience has not enlightened me sufficiently however, to determine whether this horse has a greater power of resistance, or that it is owing to the better hygienic condition he is under, since on account of superior qualities, he is possessed by wealthy individuals who can provide for his good attendance. Corn, which is the principal nourishment here, is considered by some as the source of this derangement, though horses performing agricultural labor, remain, with but few exceptions, exempt therefrom, notwithstanding they are fed upon corn during the whole year but the summer time, when they have the benefit of grass as a substitute for hay, which cannot be too highly commended towards reviving the organism. Horses employed and stabled in the city, on the contrary are confined principally to oats and hay, and it is precisely from this mode of stable management that this disease emerges most frequently. It is no seldom occurrence that this slave of the community receives nothing but oats and hay in superabundance for years, partially due to convenience, (chop feed requiring but little labor) and partly on account of the unfounded prejudice some have to corn, whereupon imbecility of digestion supervenes.

Symptomatology. The precursory signs vary somewhat. The formerly faultless ambition gradually disappears, the animal lies frequently, appetite remittant and altered. Some preferring corn and hay, others chop feed; desire for water diminished; fœces in dry, small tough glistening balls, urine muddy, smaller in quantity, evacuated in some cases with difficulty, and flanks drawn up. The visible mucous membranes of a pale hue, occasionally icterish, respiration and circulation as yet normal; accompanying these appearances, lameness in either limb or joint, which present different characteristics. It may now be related to the shoulder joint, at another time to the hip joint with cold hoofs and faint circulation in the foot, while the healthy limb possesses natural warmth. One third of the patients have hydrarthrosis; however in some cases it may be only cellular hypertrophy with increased temperature and sensibility. A warm doughy painful swelling which involves one or both metatarsal regions

is manifested in one fourth the cases, whilst in others the hoof is so tender, that the horse will not put it to the ground; it is only the toe he attempts to put to the floor; in this case examination of the foot reveals a well marked elevation of temperature. A distinct impulse of the plantar artery and a very painful sensation on pressure at the point of the frog. Stiffness and debility of the lumbar region often exists to such a degree, that when they lie down they are unable to rise without assistance.

If the practitioner's attention is drawn to any one or other of these symptoms, he will not neglect to make an accurate inspection of the head, which will, if not at all times, very often present a thickened condition of one or both jaws, principally along the alveolar cavities. A very prominent spot is observed in the immediate limits of the anastomosis of the dorsalis nasi and angularis veins which dimensions depend on the duration of the disease; during the progress of this hypertrophy the skin is rendered tense over it, but not adherent. One of the fatal symptoms in the presentation of this disease is the tendency for the toe to point upward and the metacarpo phalangeal articulation towards the floor, even sometimes in direct contact with the floor. The coronary band is painful and swollen, there is an extravasation of foamy blood in the foot and fetlock, or at the junction of the hair and horn, which indicates a rupture of the flexor pedis perforans near its insertion, and consequently permitting preternatural mobility of the foot; if this bloody exudation is wanting, it will make its appearance sooner or later, as well as the impairment of all the other functions necessary to animation.

Autopsy. If the hypertropic deformity of the bones of the face, or the preternatural mobility of one or the other foot is wanting, it is an impossibility, by simple inspection of the cadaver to decide what disease the animal was laboring under; even from the appearance of the pathological anatomy of the visceral organs we cannot arrive at any definite conclusion, thus it is necessary to subject the osseous system to an inspection as Prof. Varnell did ; *See Veterinarian*, 1860, *also William's Veterinary Surgery, p.* 171. For microscopic wood cuts see *Harley and Brown, p.* 197. My observations with but the naked eye correspond in various points with those alluded to by Prof. Varnell. I also noticed the erosions and ulcerations of the articular cartilage, principally in the phalangeal articulations. By superficial appearance the thickened maxillaries exhibit a distention of the

acunœ infiltrated with a bloody serum which when the integument is removed (the periosteum is readily detached at some places and at others firmly adherent) percolates and evaporates, causing the same bone to dry up within two or three months, so that it loses two thirds of its former weight without reducing its volume any. A diseased bone of this kind can be cut without any difficulty similar to cartilage, is elastic and tender in wet condition, when dried, fragile and proned to fracture. The muscles are relaxed, pale and intersected with considerable amount of adipous tissue. Lungs and heart are not markedly affected neither the spleen and intestines. There are ecchymosed patches in the mesentery. The liver which at the onset is hyperæmic (found it in one case atrophied, of an ash gray color and tough, the hepatic vessels and ducts shrunken) becomes frail and even partly decayed. The kidneys at the beginning are hyperæmic, later anæmic and relaxed, the pelvis often contained purulent mucous; it has also occurred that partial decomposition had taken place. The bladder generally contains an opaque vicid urine, mucous lining slackened and lead colored. I usually found that where there was a rupture of flexor tendons and ligaments, fragments of the coffin and navicular bones were attached; the excavations made by the disunited fragmen of the above named bones, bore traces of a vehement congestion which must have taken place.

In consequence of the unlimited duration of the disease which governs the different pathological lesions, I am unable to do justice in describing the intercurrent complications. What appeared remarkable to me. was the more solid consistency of the blood which may probably be attributed to the diminished desire for water that the animal had. Analysis of the same might possibly be of diagnostic value.

The course of this disease is of a chronic nature and may linger from 2 to 3 months or more, lest hectic fever intervenes which brings on a speedy termination, or that lumbago or rupture of the flexor tendons demands destruction. The convalescence is seldom complete, the structural changes of the maxillary bones are permanent and in cases where they are not involved the disease is merely characterized by lameness of the extremities and impaired or changeable appetite; a re-occurrence may be anticipated.

At the onset, the diagnosis is very obscure (as is the case in a number of other diseases), until the force of the disease is exploded by a regular rheumatic attack. The variety of forms in which this enemy

appears, very easily gives rise to errors which may do the practitioners more harm than if the case had never rallied, referring to the complexity of the symptoms. The prognosis necessarily demands caution inasmuch that the character of the disease is more mild in some years than in others, also that those attacked in the beginning or middle of the winter do not have the same prospect of recovery, as those which fall the victim thereof towards spring. Lumbago has with but few exceptions—fatal consequences. Shoulder and hip lameness of the same type are very often restored. I may here mention that not a very few consider this ailment irrecoverable.

Treatment. Change of food and locality; when circumstances are admissible I commend to have the animal run at large, where they have the opportunity to nibble at earth and eat grass even if it has no nutrient properties; in addition to the young tender grass, the warm spring atmosphere has the power of exerting such curative influences, that those animals under these hygienic advantages with but few exceptions become serviceable. Spine, hip, or shoulder lameness are very readily dispersed, by applications of irritating liniments and salves, but very apt to make their appearance in other articulations; those having spine affection must be supported by slings; if the location of pain is in the coffin joint, I have a blister applied around the foot from the coronary band to metacarpo phalangeal articulation. When rupture of the flexor tendons has taken place the animal is destroyed. An application of blistering salve, with iodide of potass, or biniodide of mercury salve has proved beneficial in checking the growth or effecting a partial reduction of the maxillary bone.

Internally I administer for anorexia and partial constipation a purgative of pulv. aloes 10 to 11 drs., and calomel 2 drs., or pulv. aloes 10 drs., podophylin 30 grs. If the evacuation of the bowels after the purge has assumed a normal consistency, I follow up with the compound of P. Rad gentian, P. aloes P. sem. colchic, and resin pini; the rheumatic type of the lameness and impaired functions of the kidneys persuades me to select these ingredients. I must however acknowledge that I have not as yet obtained any satisfactory results; I ignore all specific remedies which would tend to arrest the pathological process going on in the bones. Iodide of potass so highly recommended by some, is, on account of the anorexia and impaired nutrition it produces, inadmissable. Owing to its numerous complications this ailment will never admit to a mode of cure which would answer in all its phases.

P. S.— Since writing the above article on Osteo Porosis, made a post mortem examination on a half thorough-bred mare, which was prosprate upon good litter for almost three months. The owner on account of pietistical regards was opposed to having her killed. To avoid rupture of the flexor tendons, I warned him not to urge her to get up; however he could not resist the temptation, and she fractured the right os calcis. Through the agency of plaster paris, I obtained perfect union in four weeks; then another attempt was made to put her in the slings; finding this useless, was obliged to let her resume the recumbent posture. The next morning found the pit of the heels of the left hind and right fore feet swollen and painful; particularly when extension was brought into play. By the application of Schmucker's fomentation the inflammation subsided. A complete rupture of flexor tendons had not taken place. Decubitus on both sides of the thorax, hip, etc., gave rise to such violent sympathetic fever, followed by emaciation and collapse, that life was brought to a termination.

Disarticulated the left hind foot at the metatarso phalangeal articulation, which presented a violet blue hue at the articular cartilage. Posterior surface of the os coronœ was very much roughened from a calcification into which the ligaments and tendons were intimately interwoven. The external condyle of the os suffraginis was ulcerated, the articular cartilage of the approximate glenoid cavity intact but of congestive appearance and very friable. The upper two-thirds of the posterior surface was covered with an osseous material one-fourth of an inch thick, which stood in relation with the above named calcification. The distal interphalangeal articulation was but slightly affected. The external surface of the tendinous sheath and remaining soft tissues presented an indigo blue color down to its extreme end, where it was found detached with a fragment of the coffin bone annexed. That the usual suppuration and consequent sloughing of the hoof did not occur, is probably due to the want of reaction, dependent upon lack of vitality.

VETERINARY EDUCATION.

By D. McEACHRAN, F. R. C. V. S., V. S., Edinburgh,

Principal of the Montreal Veterinary College.

[*Continued from Page* 17.]

Let an European visitor pass through the rich agricultural townships of either the United States or Canada—let him note the vast numbers of domestic animals which go to form our herds which represent so much of our national wealth, and which are just objects of our national pride; let him examine our herd books and stud books, inquire into the great expense and trouble we go to in importing the best blood which Europe can sell us: he will be astonished to find how little we are behind even old England herself in the quality of our animals.

The lavish expenditure on buildings for housing our animals, the comfort and care we bestow on them will surprise him no less; but what must be his astonishment when he discovers that these vast herds, this enormous wealth, is for the most part left to chance when attacked by disease, or worse still, to the mercy of uneducated charlatans, yet such is the case.

It is a deplorable fact that so far, in the United States at least, even the vast amount of government property in the shape of cavalry and artillery horses, are entrusted to the care of uneducated practitioners, who hold no commissions, and receive less pay than many ordinary laborers. Is this as it should be? Surely not. Why should those in charge of our valuable herd be a whit less thoroughly educated, or occupy a less important position than the same class in England, France, or Germany?

We have now reached an era in the history of Veterinary Science in America, which demands that each member of the profession will do his duty to himself, his country, and his profession, by insisting henceforth that this noble science, valuable as noble, for by its proper utilization, millions of dollars which under present circumstances are lost annually, may be saved—must and will be wrenched out of the hands of the impostor, and be practiced only by those qualified by education of a standard, arranged and acknowledged by some recognized authority.

The question what that standard should be is the great stumbling block in the way, it is in fact the rock on which our good ship is most likely to be wrecked, unless we can convince the heads of the teaching colleges and those associated with them, that there is truth in our professional motto, *Vis Unita Fortior.* So long as mercenary motives, jealousy, or self-agrandizement, instead of the elevation of the science, actuates any one of them to frustrate concerted action, no real lasting progress can be made. We have seen the length of study and subjects embraced in the curriculae of the schools of Great Britain, and the continental countries; why should we accept an inferior position to either as we certainly do by adopting an inferior standard of education?

To every intelligent mind who knows anything about the course of study embraced in a medical curriculum, it must appear almost ridiculous to profess that more than a rudimentary knowledge of each subject can be obtained by cramming the studies into any period of time short of three full winter sessions, and I am positive no reader who has tried it, but will agree with me that justice cannot be done to any subject so crammed. What then must be the condition of those, who, with almost no education, unaccustomed to study and past the pliant age of youth, are allowed to graduate after attending lectures for eight or ten months, that is four or five months in each of two successive winters?

I do not altogether agree with a recent writer in "The Spirit of the Times," in the curriculum therein propounded—to say the least of it, it is not practicable; whoever would spend the time and money to master all the scholastic attainments suggested, would expect to be qualified for a profession offering a more advanced field for scientific renown, or else a greater certainty of lucrative emoluments, than our struggling, neglected, but noble profession as yet offers; no, our progress to be sure must be gradual, and it must be in accordance with, and in proportion to the necessity experienced by the public for our services, otherways it will neither be practical nor lasting. The writer above referred to suggests for the United States a grand central veterinary institute with each professor a specialist in his subject, the institute or university to be richly endowed by state grants, &c., the idea is a good one for that country, but his ideas of detail are extravagant and impracticable, and his sweeping denunciation of all the powers that be, except the creations of his own fertile imagination, are far from calculated to further the ends he has so much at heart.

For our Dominion of Canada such an institute could never exist, owing to our peculiar geographical positions, and other potent reasons, and as the former, (though I repeat much to be desired) is not in the immediate future. What remains to be done, is to endeavor to raise the now existing colleges to a proper standard.

1st. By instituting on each a matriculation examination embracing, Writing, Arithmetic, Euclid, Latin and English Grammar.

2d. By extending the curriculum over at least *three winter sessions of six months each*, and insist on the summer months being spent in practice, or if not, a fourth session be required. In my opinion great injury is done to the profession by practical application being greatly neglected by the most studious pupils, and very often those best posted in book knowledge, are least adept in the practical application of it.

I maintain that even if we suppose a student capable of reading up fairly the theoretical studies within the same consecutive twelve or fourteen months, it is absurd to imagine that he can have even a crude idea of practice—he cannot possibly spend his time in lecture-room, dissecting-room, study, and be attending to practice at the same time, and we all well know that not one in fifty have the opportunity during the vacation of the summer months of seeing practice, except a neighbor's cow or horse, which he is allowed to attend as a matter of favor.

Most students are so situated that they have to give their assistance during the summer on the farm or otherways to help them to pay for winter's expenditure, hence, some steps ought to be taken by the colleges to insure a practical as well as a theoretical knowledge. This matter cannot be too forcibly impressed on those young men who intend entering the profession, but more particularly on those who are responsible for arranging the course of study at our schools. I am aware that the practical education given at certain schools is paraded in excuse for an extremely short course, but, surely no man of common sense will believe that even if a student were to see all the practice of any three veterinary colleges during four months of winter, with nothing else to do, that he would see one tenth of the practice necessary to properly prepare him for the discharge of his professional duties with credit to himself or satisfaction to those who employ him, and how much can he see when he has three or four lectures to attend every day besides reading and dissecting. Is the want of practice not

too often the cause of failure? Have we not often seen our best book and lecture room knowledge students, make most unpardonable practical mistakes, when they have assumed practice for themselves? On these grounds alone should we not urge an increased length of pupilage?

It is much to be desired that those who wish to become members of the profession should devote their whole time to it, and not as is too often the case study merely during the session and immediately it is over undertake other duties which have no relation to the science.

I need not refer to the early history of the profession in America. Professor Liautard in the first issue of the Review having laid that ably before our readers and to that paper I refer those who wish to know the ups and downs of veterinary education in the United States. What I have chiefly to do with in this paper is the teaching of the profession as it is at the present time in the United States and Canada.

At New York we have the American Veterinary College, under the able superintendence of Professor Alexander Liautard, M. D. V. S., a gentleman who from his enthusiasm and extensive medical knowledge and who having the best interests of the profession at heart, is eminently fitted to be a teacher of the science. At this school the following course of study is given—see annual announcement 1876:

"The curriculum provides for a thorough theoretical and practical medical education; the fundamental medical sciences Anatomy, Physiology, and Chemistry; together with theory and practice of Veterinary Medicine, Surgery, Obstetrics, Materia Medica and Therapeutics are lectured upon during a regular winter session of *four and a half to five months.*" At the end of the winter session a spring course has been opened embracing different branches with lectures on Comparative Anatomy, Jurisprudence, Sanitary Medicine, External Forms of the horse and Pharmacy.

The requirements for graduation are, twenty-one years of age, a certificate of three years study of medicine, *attendance on two full courses of medical lectures, the last being in this college.* A good English education, proper testimonials of character, and a satisfactory written oral and practical examination, *by the professor of each department of instruction.*

I am happy to say that the principal of this college is fully alive to the fact that the session is too short, and also that three sessions

should be required. It is sincerely to be hoped that the faculty will support him in making the much to be desired reforms. If I understand the meaning of "the attendance on two full courses of medical lectures, the last being in this college" correctly, all that is necessary is the attendance for four and a half months, that is, any medical student who has attended lectures for one session, can after four months and a half or five, present himself for examination, and if he has read up enough, obtain the diploma certifying him qualified to practice. How can he be? What can he know of practice, unless he has been following quackery before? I trust not many follow this system—even suppose they attend the two sessions at the veterinary college, is it possible that a science so abstruse, so comprehensive as to embrace almost all sciences can be mastered in nine or ten months? for as I before stated very few either practice or study during summer.

Again the "oral and practical examination being *by the professors of each department of instruction* is certainly not to be recommended, nor will the public accept its results as being as reliable as if they were examined by an outside and impartial board of examiners, unconnected with the college. It is to be regretted that a college, capable as it is, with an eminent teacher at its head, a valuable museum, excellent infirmary accommodation, and located in such a city as New York, should not adopt a curriculum in keeping with the progress of the profession and their great opportunities.

At Cornell University we find Veterinary Science occupying a position creditable alike to that university and to Professor James Law, F. R. C. V. S., who ably fills the chair of Veterinary Science. Here we find the regular course embraces: " First, five lectures per week extending over the academic year. Secondly, laboratory work on bones, skeletons, elastic models, pathological preparation and parasites. Thirdly, clinical instruction on the cases occurring in practice. For the degree of Bachelor of Veterinary Science a four years course is provided for, the last two years of which are entirely devoted to special veterinary studies, and embrace a most complete curriculum, Anatomy, Physiology, Histology, Zootechny, Hygiene, Botany, Toxicology, Pharmacy and Therapeutics, Veterinary Medicine and Surgery, Obstetrics, Surgical Pathology and Anatomy, Examination for soundness, Principles of shoeing, Physiological and Pathological.

It will thus be seen that the course at Cornell is quite up to the requirements in the theoretical branches, but it is questionable if the

practical advantages are equal to those to be found in a large city. Professor Law's educational work is not confined to his professional duties; as an author and editor he has done much to forward the profession in his adopted country.

At Illinois Industrial University, Champaign, we find the chair of veterinary medicine ably filled by Prof. W. F. Prentice, M. R. C. V. S., who has raised his department to one of importance and whose students are well grounded in the science. I am not aware that any degree is granted by the University in Veterinary Medicine.

Lectures on Veterinary Medicine are given in most of the Agricultural Colleges, especially at Amherst, Virginia, Ohio, Maryland, Pennsylvania, Dartmouth, N. H., Vermont and Iowa. So far as I can learn, none of these chairs are filled by qualified members of the profession, unless the gentleman who fills that position in the last named Agricultural College can claim to be, he having attended for a short time, lectures at New York, during the winter of 1875 and '76, on Anatomy, Practice and Surgery *only*, and who in his own words, "wanting to take advantage of his vacation from the middle of December 'till the middle of March next, in attending some Veterinary College that affords good facilities"—being refused a short cut into the profession at the Montreal College, gained easy access at Toronto, and his name flourishes among the recent graduates of that school. As the middle of December would be the 15th supposing he entered then, he would have one week before the Christmas Holidays. The session reopening about the middle of January, he would have nearly ten weeks more to the end of March, nearly eleven weeks altogether, in which to reach the high standard of perfection claimed by that institution, in Chemistry, Materia Medica, Physiology, Horse Pathology, Cattle Pathology, Entozoa, Principles of Shoeing, Breeding of Domestic Animals, Dissecting, Extensive Practice, &c. His success as a student, either must be credited to unprecedented ability on his part or else to a lamentable disregard for the interests of the profession on the part of the Ontario school. The latter I fear is the most likely, and it is much to be regretted, especially in the case of a person occupying the position of a teacher of science.

In the next number I will refer to the profession as taught in Canada, and propose a scheme for placing the profession in America (United States and Canada) in a position proportionate to its importance and requirements of both Countries.

ENTEROTOMY,

By John Myers, Jr., D. V. S., of Cincinnati, Ohio.

The relative frequent occurrence of flatulency of the bowels as an independent affection, or as a sequence, its rapid progress and curability under appropriate surgical treatment, is a matter of extreme importance. It is not my zeal to impart the contents of this inadequate manuscript, as any recent discovery in veterinary literature ; on the contrary the performance of enterotomy dates as far back as the fourth and fifth century by Vegetius, though never professionally practiced or reported until the latter quarter of the eighteenth century by Bourgelat and Chabert, later by Barrier and Harouard, and still later by Hayne, Brogniez, Herring, Delwart, Lafosse, Charlier and numerous other practitioners whose citations strongly convince the reader of its efficacy and innocence. Others again, denounce the operation, owing to the complications that have presented themselves, such as Peritonitis, abscesses, internal hemorrhage by puncturing the cœcal artery, or death ensuing without it (the operation) producing any satisfactory change; in these latter instances, it must either have been performed on improper cases, or too long deferred, rendering it impossible for the operation to attain the merits it really deserves.

Enterotomy has been performed by puncturing various portions of the intestinal tract; in the majority of instances the colon and base of cæcum in the right flank, "owing to the predominant gas collections there" is the preferred seat of puncture, however, punctures have been made in the left as well as inferior surface of the abdomen and even per rectum, without producing any detrimental consequences. Some very hazardous tools have been employed in performing this operation, and still merits are claimed for its execution, but, the most appropriate and approved instrument is a trocar; which has been modified in quite a number of ways, none practically considered of any appreciable advantage. Brogniez in 1843, constructed a lancet jointed trocar that cannot be withdrawn from the canula to which it is fastened with screws, possessing a bivalve near its end, which, before introducing is concealed within a receptacle, and after it is introduced the valves are thrown

open by manipulating a screw at the flange allowing the gas to escape through the receptacle and out of the canula; the object of the bivalve is to support the intestinal walls so that they cannot recede whilst the gas is escaping, which would otherwise be apt to displace the canula. As judicious as this construction seems to be, it has certain disadvantages, the point being retained within the bowel, and by virtue of its (the bowel) collapsing the opposite wall is in danger of being injured. The small openings for the valves are apt to become obstructed by particles of food which prevent their closure, consequently rendering it exceedingly difficult to remove the instrument without causing more or less damages. The inventor of this instrument ascribed to it an electric property generated by the contact of the different metals it is made of, with the acid contents of the bowels, which electric force, he in 1849 declared to be of minor importance. Hayne's trocar is from 8 to 10 inches long, and from $1\frac{1}{2}$ to 2 lines thick; in my estimation a most appropriate instrument.

Gaube reported in 1849 a case upon which he operated with bistoury and quill. The introduction of therapeutics through the canula has also been advocated. Delwart in 1846 reported an instance where he introduced oz. xii. tincture of aloes into the bowel through the canula with good results "Cathartic." Brogniez is another supporter of this practice, but more recent practitioners do not regard it as essential. Lafosse during his experiments upon different cases retained the instrument from 6 to 30 hours, which proved unnecessary for all the movable gas will find its exit from 3 to 8 minutes, and its retention by the persistent irritation is very liable to produce inflammation, adhesions, and abscesses.

Schaak in 1839 reports a case where a scrotal abscess supervened, which complication is by no means very uncommon. Cartier in 1849 cites a case where it was an impossibility to close the valves of the trocar necessitating a forcible removal which produced an abscess of three weeks duration. Numerous other cases of abscesses have been reported principally from French sources with comparative good results.

I abstracted these chronicled items chiefly from the surgical work (Operations lehre) edited by the eminent author and pioneer of veterinary science, Prof. Ed. V. Hering whose technical rules I took as a guide in performing the operation in general, deviating from them only in minor matters. Moreover as far as I could

ascertain by the perusal of my limited library all the advocates concur in the manner of its performance, which I presume you all know. In giving a brief sketch of the procedure as I usually follow, I am obliged to ask your forbearance, for I have nothing to improve it, but am doing it to induce my younger colleagues to lay hand at work and make use of a therapeutic manual which has been too long underrated, perhaps discarded by one and dreaded by another.

The point of selection is indicated by the most exaggerated tympanitic resonance on percussion between the external angle of the illium, posterior border of last rib, external margin of the transverse processes of the lumbar vertebra and about 4 inches beneath the latter, on the right side, which is preferable, lest I observe contraindications when I attack the left side or inferior walls. If the escape of gas does not prove satisfactory, I do not hesitate to tap both flanks, and if necessary would repeat the puncture at some other spot. The preparatory measures are simply to remove the hair from the chosen spot, oil the canula and be supplied with a sound to remove obstructions, which might by the current of egressing gas be forced into the orifice of the canula. Some authors advise a small incision to be made into the skin after the removal of the hair which would facilitate the passage of the trocar, though in my estimation it is scarcely necessary if a delicate instrument is used with a calibre measuring 1-16 of an inch and 6-8 inch long. The trocar is taken into the right hand with the handle well braced in its palmar surface, the index finger extended over the canula to mark the depth I choose to grant its insertion, which is usually about 4 inches, then I thrust the instrument forcibly into the intestine in a *slightly* oblique direction from above downward, so that when the bowel recedes the orifice of the canula is not obstructed by the relaxed intestinal walls, then I remove the stylet "always retaining the left thumb and fore finger on the flange of the canula to secure its position," and the gas will readily escape provided the liquid or solid material within the bowel does not obstruct the canula when the use of the sound would be called upon to remove the barrier and the escape of superfluous gas will continue until the bowel becomes entirely evacuated, then I will draw the canula and depend upon nature for cicatrization. It has been suggested to apply a piece of adhesive plaster over the wound, which is very proper if an incision is made. In some cases, profuse hemorrhage may occur after the removal of the canula no doubt due to laceration of some arteriole in the skin or

abdominal walls, which seem to be engorged with blood in consequence of stagnation, brought on by the pressure of gas, and is of minor importance.

The evidence of relief, if not entire convalescence, is markedly manifested, the previous restlessness is transformed to a state of quietude, collapse of the abdominal walls is very obvious, the previous anxious expression assumes a grateful countenance, the injected cynotic visible mucous membranes become florid, the laborious respiration calm, the reoxigination of blood returns followed by the strengthened condition of the heart, reproducing an equalization of temperature, oscultation reveals the return of borborygmus, also does the bladder resume the power to evacuate its contents, and if coma has supervened "the result of pressure upon the vascular system," with the cessation of all other perilous symptoms it certainly must subside.

Enterotomy may also be employed as a palliative measure with benefit. There are diseased conditions of the abdomen such as Peritonitis, Constipation, Emboli, Thrombi, Strangulated Hernia, Calculi, etc., where flatulency is present as a secondary effect and is merely symptomatic, nevertheless often exerts sufficent destructive influences over the vital organism to produce death, before the morbid condition of the bowels can be eradicated, hence the use of the trocar is indicated, thereby relieving pain and enabling the original disease to ameliorate or run its course, also would it insure more time for the action of medicines and allow the circulatory system to proceed by virtue of the relieved tension, causing dilatation of the blood vessels and return of nervous force promoting increased peristaltic action of the bowels which enables the gasses and foecal matter to find an exit; all of which are valuable factors in the restoration of life ascribable to the operation.

On inspecting a case of flatulent colic while in a recumbent posture, it would seem to be the most proper moment to perform the operation, by reason of the increased distention of the visible side, which is a mistake; there are great dangers connected with this method, should the patient happen to struggle or make an attempt to rise, the sharp point of the stylet or retained canula is apt to injure the intestines, moreover the trocar is liable to break at the handle or somewhere through it smetallic course, which would be an unpleasant occurrence to both practitioner and patient. I have had frequent occasions to put this method of treatment into practice from the fact that the consummation

of fermenting food, owing to its moderate price and convenience of administering is very great in this district. However numerous the cases that came under my observation were, I am unable to furnish reliable statistics to convey an idea of the convalescent percentage, but feel confident to say that ⅔ of the patients that I operated upon recovered, not disregarding the incurable complications which may have existed. Also will I admit that amongst those that recovered, there might have been a small percentage, that would have rallied without surgical interference nevertheless, feel gratified at the result achieved by subsiding the unnecessary suffering the animal otherwise would have experienced, "which result is sufficient cause to justify its practice considering its innocence.

EDITORIALS.

CATTLE PLAGUE.

Thanks to the measures taken by the different European governments, where the rinderpest had made its appearance; we are glad to read in our foreign papers that all fears of a large spreading of the disease are fast subsiding. Still the Journal d'Agriculture of March 31st, published in Paris, informs us that few new cases have made their appearance in England, one at Hull on the 22d, and two others in London. At Hull eight animals were destroyed, in London forty-one.

However we hear that in Prussia, all measures have been suspended the disease being considered at an end. France still keeps a sharp lookout for the execution of her sanitary orders. Switzerland amongst European powers is the only one which has not taken extra measures against the importation of the disease: with full faith in the execution of the sanitary measures of Prussia, the Swiss government has not judged necessary to prevent the importation of cattle on its territory. The recent order issued by our Secretary of Treasury will probably have to be suspended as long as such good news come to us from Europe, at least as far as the rinderpest is concerned, but how about Pleuro Pneumonia, Variola, Venereal disease of Solipeds, &c.

AMPUTATIONS IN ANIMALS.

Amputations of extremities, which occupy such a large place in human surgery, are far from having the same importance in the therapeutic of animals. In man many diseased conditions may render this operation, *one of necessity*, such as diseases of bones, communitive fractures, complications, dislocations, articular diseases, gangrene, aneurism, &c. It is also very essential in removing some malformations or may be useful in preventing the absorption of virulent principles as in cases of bites from rabid or venimous animals. These circumstances of course may also exist in animals, but the fact of their inability to perform work after recovery, and the ever constant question of expenses &c., have always been of a greater weight in the scale against the practicability of the operation, and for these reasons is it, only on few occasions and in animals of great value that practitioners can decide owners to run the risks of a doubtful result. Still it can be recommended in cases where a valuable animal can be kept for breeding purposes, when a pregnant female is to be preserved till her time of delivery; in case of a superior milking cow or even of beast intended to be fatten for the butcher. Though these peculiar conditions must have been met in general practice, the number of successful amputations placed on record in veterinary literature is very limited. Another case can be added to the list, which we extract from the "Veterinary Journal," and which will be found in full in this number of the *Review*.

OSTEO-POROSIS.

Some time ago Mr. J. Myers, Sr., of Cincinnati, Ohio, sent us at our request a translation of a long article on that subject, which he had written in German and which was published in Hering's Repertorium. Through the kindness of Mr. M. who has consented to it, we are able to present our readers with a translation of the original communication. As it is a disease which prevails to some extent in some parts of our continent, and as in many instances it assumes a very insiduous form, the contents of the article will prove interesting, especially coming from one who has had much experience with the disease and its treatment.

As a complement to its writings, we may say that Mr. M. informs us that besides the therapeutic to which his patients have been submitted, "he has practiced lately transfusion of blood from lambs and calfs into two subjects, in which the appetite and general secretions (urinary principally) responded in a quite favorable manner, though the lameness and enlargement of the maxillary bone did not seem to be benefited."

ABSTRACTS FROM FOREIGN JOURNALS.

CONTINUED IRRIGATIONS IN THE TREATMENT OF SURGICAL DISEASES.

Under this title Mr. Trasbot the learned clinical professor of Alfort, publishes a series of observations, where in combination with surgical manipulations, the constant current of cool water was found much beneficial. Employed in animals who have been operated for deep puncturating wound of the foot, for cartilaginous quittor, for suppurative corns, in those where a too severe cauterization by the actual cautery had been produced, in diseases of the withers and of the poll. Mr. Trasbot gives the following conclusions: "generally the continued irrigation is indicated in all surgical affections likely to be complicated or already so, with necrosis of a tissue of little vitality, fibrous or fibro cartilaginous. Applied immediately in the wounds of the plantar region, it prevents mortification of tendon and keeps the wound in good condition for repair. When neurosis has begun, it will stop it and bring the part back to a condition of perfect cicatrization. In the most severe cases of sesamoid synovitis, of caries, of open joint, it becomes almost the indispensable and certainly the most efficacious complement of the operation. Whenever, after suppurative corn, pricks by the blacksmith, contusion of the foot, the flexor tendons or the cartilage of the third phalanx have been exposed and more or less macerated by the suppuration, the irrigation better than anything else will limitate the complications. When a joint has been open nothing will with more certitude bring on cicatrization of the wound. Though not from personal experience, he believes that in traumatic arthritis, the effects of irrigation must be very satisfactory. It is the only one which will prevent the slough of large

pieces of skin after severe firing, especially when performed in warm weather. In the treatment of fistula in withers or of poll-evil, some care is to be exercised in the use in cold water, as if there is no doubt as to its therapeutic action, it is possible that the effect of constant refrigeration in those seasons on a large surface of the skin, would give rise to visceral diseases with fatal terminations.

The mode of application consists in having a tube of India rubber varying in size or in diameter and to have the water pouring in sheet slowly over the wounds, cool is generally better than cold water. (*Archives Vet.*)

This mode of treatment we have put in use in a few cases and have every reason to be satisfied with it. The last case we applied it was in a large grey horse suffering with fistula withers, in which however but little benefit was obtained by the treatment.

CHOLESTIRHEMIA.

Under this title Mr. P. Megnin describes in the Recueil de Medecine Veterinaire, an affection of horses due to the presence of cholesterine in excess in the blood, a fact which he has been able to establish by the miscroscopic examination of the blood of animals who had died under peculiar circumstances. The interest attached to the history of the disease, which has some similarity with one of our American affections as far as its rapidity of development and its fatality induces us to reproduce a brief account of Mr. Megnin's article. The observations which are reported are from five animals, all in appearance perfectly healthy, in a fat and plethoric condition, died suddenly while at work, without presenting any symptoms of diseases; all were fat, all were full of life and were real pictures of health and all at once, while in harness or under the saddle, were suddenly seized with general tremblings of the whole body, profuse perspiration and had died in a few moments, one having presented some symptoms of paraplegia for a short time, with a stertorous breathing.

The post mortem revealed all the organs in perfect normal state, "the abnormal and thoracic cavities were healthy; the omentum and mesentery contained a thick layer of fat, the kidneys were surrounded by a fatty envelope; the liver was firm but marbled with fatty zones which made it look yellow; the cranium showed the meninges much

injected, the ventricles were full of reddish serosity, the cerebral superficial blood-vessels were engorged and the encephalon when cut, appeared in its whole thickness, covered with red spots or puncta of a characteristic aspect; each of these spots was formed by a hemorrhagic effusion. The blood-vessels have no atheromatous, varicuous oraneurismal alterations, but are surrounded by a mass of small crystals which are found also in the blood. These are little and thin lamellæ, trapezoid, rhomboidal or parallelogrammic in shape, a characteristic form, they are insoluble in water, but very much so in alcohol and ether, they are pure cholesterine."

After giving the chemical history of this substance, its mode of formation, its action on the blood, &c., Mr. Megnin draws the following conclusions:

1st. "The horse is subject to a diathesis which has a great analogy with the uremic diathesis of man, and which may be called cholesteric diathesis from the produce which causes it.

2d. The accidents, consequence of this condition, are either the production, more or less rapid, of tumours with elements of cholesterine (cholesteatoma of the brain, entheroma of blood vessels) which produce death sooner or later; either the deposits under solid form, in the blood of excess of cholesterine, which brings on embolims of the brain, or the lungs, and sudden death.

3d. In cases of paraplegia, pulmonary or cerebral congestion, taking place in fat subjects and followed by rapid death, the blood ought to be chemically and microscopically examined to find the true cause of death.

4th. Therapeutics being unable to resist the fatal sequelœ of cholesterimia, all that can be done is to try to oppose the development of obesity in an animal, especially when advanced in age. (*Recueil de Medicin Veter.*)

AMPUTATION OF THE METACARPUS IN A COW.

The subject was a two years old, short-horn heifer; at the arrival of the Veterinary Surgeon, Mr. W. E. Litt, the animal was found standing on three legs, with a fracture of the off fore leg, about the middle of the metacarpal bone. Anxious to save the life of the poor beast, it was decided to amputate her leg. After being cast, a tourniquet applied above the knee to press on the radial artery, an incision

was "made by passing the knife directly through the leg, as close to the back of the metacarpal bone as possible, the edge of the knife being turned towards the operator, and about an inch and a half from the head of the bone. By then cutting downwards and backwards, the knife was brought out some three inches lower down at the back part of the leg." A similar flap was made anteriorly; the shaft of the bone was then sawn as high as possible, the artery secured, and the flaps brought together by thread sutures. A bandage of oakum and several rolls of unbleached calico finished the dressing. Eight days after this bandage was removed and the wound found healing. A month after it was almost entirely cicatrized. An artificial leg was made for her, somewhat on the same principal as the human wooden leg, and the animal seems to be at perfect ease with it. (*Vet. Journal.*)

CONSTRICTOR ROPE CARRIER.

It is so called because it seizes and holds on a part sufficiently to allow of strong pullings without fear of its getting loose, and because it permits to take a firm *point d'appui*, whatever may be the form or direction of the organs. It consists of an iron rod of 0m. 70 centimeters (27 inches) in length and 0m. 01 centimeter (2½ inches) in diameter, curved at one end which is terminated by a small transversely elongated button with two holes; the other end has a handle with an eye of the same diameter as the holes of the first extremity, and of a cord 2 meters (six feet and half) long which can glide into the three openings of the instrument. Passing this cord through the openings of the handle, then through one of the holes in the front part of the instrument and through the second; it is prevented from sliding back by a small knot, and then it it ready for use.

The inventor reports cases of presentation of the hocks, one anterior presentation, the knees being flexed backwards, a presentation of the base of the neck, the head bent towards the flank in which he claims that the application of the rope carrier has considerably facilitated the delivery. (*Journal de Zootechnie.*)

A NAIL IN A COW'S LUNG.

Seized with an access of cough while laying down, (cough which the cow had for about two months) when urged to get up a flow of

blood and of very offensive matter took place through the nostrils and mouth. The animal carries her head down, eyes partly closed, the pulse is small and quick, pressure on the throat gives rise to dry and painful cough, respiration is accelerated, the walk is difficult and accompanied with grunting noise, the nostrils are bloody, auscultation reveals sibilant rale in anterior part of the left lung, on the right side little increase of respiratory murmur with tubular murmur above and in front.

Diagnosis. Cavity in the right lung, due to softening of tubercle communicating with the bronchia. The animal was destroyed for the butcher.

Post mortem. Adherence between the reticulum and diapragm; in the substance of this adherence a nail running through the parts and reaching the lung as far as the heart. The lungs removed from the thorax have a very offensive odor and on the right side show a large tumour, which cut open is an enormous cavity filled with reddish pus, with a gangrenous smell, and having on its walls a semi-circular fissure in which the nail was resting with its point turned towards the heart. (*Journal de Zootechnie.*)

This is another example of the accidents which may accompany the introduction of foreign substances in the digestive apparatus. It is true that in many instances no complication will follow the presence of these foreign bodies, but a few cases are on record where fatal results have taken place.

CALCAREOUS TUMOUR OF THE BRAIN.

At a meeting of the Societe Centrale de Medecine Veterinaire, Mr. Bouley presented a pathological specimen, having some rough resemblance with some calculi found in glandular organs. It consisted of a calcareous concretion found between the cerebrum and the cerebellum, in one of the cerebellous choroid plexuses of a stallion, affected with immobility to an extreme degree, suffering with an excessive automatism, the animal remained unconscious in any position, his limbs crossed over each other, his head being carried low and being unable to raise it. The tumour was formed of carbonate of lime, with a small quantity of phosphate. *Recueil de Med. Vet.*)

FRACTURES OF THE FLOOR OF THE PELVIS.

Mr. Nocard reports two cases of this kind of fracture.

The lameness accompanying these accidents is very characteristic. In standing, the left hind leg is carried forward, resting on the toe; in walking the animal is very lame, his lameness being so peculiar that the leg seems to move all in one piece, and carried with a circular adductory motion. The conclusions of the paper are 1st, the floor of the pelvis can be the seat of comminutive fracture, involving the pubis and ischium where they are the least resisting, viz., in front and behind the obturator foramen. 2d. This fracture will unite quick, the ends of the bones being kept close together by ligamentous and muscular supports. 3d. Constantly, the cal of repairing process, presses atrophies and destroys the obturator, pelvi crural and posterior crural nerves which run through the framen ovale, or pass in its neighborhood; hence paralysis, atrophy and degeneration of the flexor muscles of the leg and adductors of the leg. 4th. There remains a lameness which renders the animal unfit for work. 5th. This lameness is characteristic, and alone can induce to suspect the existence of the lesion. 6th. Rectal examination will, with certainty, establish the diagnosis and prognosis of the fracture. (*Archives Vet.*)

RHEUMATISMAL LAMENESS.

This lameness may be said to follow one out of every ten cases of pneumonia, pleuresy, pericarditis, truly inflammatory, or typhoid, appearing generally during the convalescence; they sometimes show themselves later, over one hundred and eight days after the invasion of the disease. In 1869 a mare after an attack of typhoid disease showed a synovitis which affected successively three extremities and ended by locating itself on the left front fetlock. Blisters and firing failed in removing it, a large blister and mustard poultice on the chest in the cardiac region were followed by the removal of the lameness. This treatment repeated in eleven cases of rheumatismal lameness, proved generally successful. (*Recueil de Med. Vet.*)

REPORT OF CASES.

SERIES OF CASES FOR THE HISTORY OF FRACTURES.

By A. Liautard, M. D. V. S.

A. Compound fracture of principal metatarsal.

Description. Brown stallion, 7 years, long tail 16 hands high, has trotted very fast and is kept for the stud about 200 miles from New York.

History. Taken to the blacksmith on the 25th of February, to be shod, was found some hours afterwards at the door of his stable with his leg fractured. My first visit was on the 26th, when I found him in a large barn with an oblique compound fracture of the large metatarsal bone of the right leg. The upper fragment of the bone protruding through the skin. Foaming blood, was oozing in small quantity through the wound. The leg was much swollen, and the animal in excessive distress.

Prognosis, most unfavorable, the nature of the injury, the length of time since it took place, the nervous character of the patient; everything pointed to a bad result. Still at the strong request of the owner the animal was placed in the slings and a temporary bandage supporting an imperfect gutta percha splint that I had with me, was applied until a better one could be secured. (It must be born in mind that the place was several miles off from the village, in a small farm where nothing could be found.) On the 1st of March, I found him very nervous, but quite comfortable, appetite improved. The dressing being removed the wound looks well, little suppuration is oozing. A piece of skin mortified by the pressure of the upper bony piece against the bandage sloughed off.

I had prepared a box of gutta percha, composed of two similar long halves or pieces, and made so as to embrace the leg from the hock down to the foot. They were well padded with oakum and the leg enclosed in them; the whole secured by turns of rollers. A window had been left in the center to allow the pus to escape, and the

leg being found perfectly immobile the animal was comfortably arranged in the slings and received his dinner. On March the 5th, the bandages are found loose, and though the gutta percha holds quite firm there is much motion between the ends of the bone. The swelling of the leg has subsided. The upper fragment of the bone is protruding through the wound, the lower one rubbing against it as the animal moves his leg. The dressing was reapplied again with more padding and the rollers put on tight with recommendation to tighten them if necessary.

March 8th. found him again in about the same condition, although the bandage is well in place, still there is yet some motion and it seems impossible to prevent it as the animal is constantly moving his leg up and down without an instant of rest. To try to reach this effect, the whole leg was placed in a sling by itself, being supported from the hock down and carried forward, this somewhat limitates the motions. The wound looks perhaps better, some organized tissue is thrown round the bones and in the cellular tissue surrounding.

March 12th. Same condition, his leg is kept more comfortably in the slings, less motion of the fractured extremities, there is a great amount of offensive discharge through the opening of the bandage. Carbolized wash is directed to be kept on it all the time.

March 19th. Two pieces of bone came through the window of the bandage, they are from the upper end of the bone. Up to this day he had fed well, but all at once he seemed to give up his case; his appetite stopped, his nervous irritability increased, he fights against the slings so much that it is thought better to let him lay, and from that day till the 22d he lingered, when he died from nervous exhaustion.

Questions: Was the attempt at reduction contraindicated? Would not amputation have been better? If so and successful, would the horse have been able to perform his duty as a stallion?

B. Compound fracture of lower maxillary bone. Dumb rabies.

On the 15th of July, 1876, a small terrier slut was brought to the American Veterinary College, with the following history: "That she had been bitten by a milkman's dog; the fracture existed in both branches of the maxillary bone, a little posterior to the neck of the bone, compound the edges of the bones protruding in the buccal cavity. She was dressed by Dr. C. W. Crowley, House Surgeon. On the 1st of August the bandage was removed on account of the offensive smell

of the parts; as the bone was found pretty well united, it was thought that she could be allowed to go about without the bandage, her kind temper and *affectionate* disposition justifying to a certain extent the measure. However, as soon as she was returned to her stall and let loose, she began to try to bite the cup in which her food was contained, and fearing she might injure herself, her jaws were secured again in the same way with lighter dressing. On the following day she was let loose in the hospital, she ran at a large grey hound and tried to bite him, he cowardly ran off, and the assistant house surgeon reported that she had ran at a Danish slut, and also at the cats.

On the 3d she looses her appetite, on the 4th she gives through her closed mouth a peculiar howling, and when let loose she tries to bite cats and dogs, but is prevented by her bandage. Her temperature is 103° F.; in the evening she begins to show signs of paralysis of the hind legs.

On the 5th, 7 A. M., her temperature is 104⅘ F., her hind limbs paralyzed—died at 12 o'clock.

This case shows the importance of thorough knowledge of the history of any patients. Had the incubative stage of the disease of this dog been as long as is in many cases of rabies, her fracture would have united, she would have gone home and God knows what terrible consequences might have taken place.

(*To be Continued.*)

INTUSUSSEPTION WITH OBSTINATE CONSTIPATION.

By W. J. Coates, D. V. S., House Surgeon.

On Sunday morning, April the 8th, a large black geld, 6 years old, belonging to Messrs. Rafferty & Williams, was brought to the American Veterinary College Hospital suffering with colicky pains. He was taken with colics on Saturday evening, and they continued since; he would paw, get down very easy, roll on his back and stay in that position for four or five minutes at a time and then lie on his side for a while, get up again and so on the whole night, urinated freely but passed no feces; he did his usual work on Saturday and eat no feed that evening. The stable-man gave him one half pound of epsom salts and one oz. sweet spirits nitre, but did not relieve him.

On admission he looked very anxious, pulse 48 full and strong, temperature $101\frac{2}{5}$, conjunctiva and schneideruin membranes congested and all the symptoms of colicky pains. He was ordered Tr. Opii 2 oz. Ether Sulphur 2 oz., Chloroform ½ oz. in oleum lini 1 O, no feed and all the water he would take. At 12 M. not being relieved, gave Aloes Barb. 7 drs. 2 P. M. very uneasy Tr. Opii 2 oz. 5 P. M. uneasy took away from him six quarts of blood and gave an injection of soap water to be continued every two hours. Tr. Opii, as may be required.

On the 9th at 7 A. M. easier, urinated but no feces, injections every three hours; opium as required and drench of soap water three times a day. 6 P. M. Oleum Lini 1 O., Ammonia Carb. 2 oz., Extract Bellad 1 dr. 10 P. M. very uneasy, same injection and drench of Tr. Opii 2 oz. in soap water.

On the 10th pain continually, rolling on his back and stayed in that position fifteen minutes. Pulse 64 soft irregular and intermittant temperature $102\frac{2}{5}$ and no feces, drenched with Pulv. Aloes Barb. 4 drs. Oleum Croton 5 drops., and Oleum Lini 4 oz. 12 M. uneasy, pawing and rolling; gave a drench of Tr. Opii 3 oz., Aq. Ammonia 3 drs. in soap water. 10 P. M. same drench.

11th, easier, no feces, injections every half hour, drench three times of soap water with Sulphur Sodæ 3 oz., Alcohol 3 oz. and opium as required. 5 P. M. easy, passed about two quarts of feces with *gangrenous portion of intestines* of a very foetid odor. 10 P. M. easy, drench of Tr. Opii, 2 oz., alcohol, 3 oz.

12th, easy, pulse irregular and weak: temp. $101\frac{3}{5}$, rectum full of feces and emptied; injections every three hours and Sulph. Soda 4 oz. in gruel morning and evening and a little long hay wetted, also Tr. Opii if required. 6 P. M. drank little of the gruel and eat the hay. 10 P. M. emptied rectum and drank alcohol 6 oz. in water.

13th, passed a shovel-full of feces and drank his gruel; pulse 52 irregular but stronger, temperature 101. Injections every four hours and alcohol 4 oz., morning and evening. 10 P. M. seemed easy, eat two quarts of scalded oats and took his alcohol.

14th, eat well, pulse 48 and regular, temperature $100\frac{1}{5}$, alcohol 4 oz. morning and evening.

15th, pulse and temperature normal and getting along nicely.

16th, little weak but doing well and ready to return home.

17, discharged to be fed light for a few days.

MELANOTIC TUMOR:—REMOVAL:—RECOVERY.

By Charles H. Hall, D. V. S. (House Surgeon.)

The 20th of last March a spotted grey gelding, eleven years old, fifteen and three-quarter hands high, owned by Mr. Charles Mulford of this city, was brought to the American Veterinary College, with the following history: "The swelling which you see upon the lower part of the neck is now the largest it has been in three years, during which time it has been gradually increasing from nothing. It has not given much inconvenience till the last two weeks, when, on account of the pain from the pressure of the collar, I have been unable to work the animal."

Condition on admission.—The tumor was situated in the inferior cervical region, a little to the right of the median line, just under the lower portion of the levator humeri muscle, in the triangular space, formed by this muscle and the anterior border of the sterno humeralis; it was large, hard, well defined and firmly attached; decided to be of a melanotic character, and its removal desirable; the animal was in good health and spirits.

Prognosis, favorable.

Treatment.—On the 24th he was cast and a longitudinal incision of four inches was made over the enlargement, and after careful dissection with the aid of scalpel, and often by laceration of the adhesions with the handles of the instrument, a melanotic growth of fourteen and a half ounces in weight was removed without loss of blood of any consequence.

The final separation was effected with the ecraseur on account of a large blood vessel, probably a branch of the inferior cervical artery, passing through the tumor.

The cavity was then dressed with oakum and carbolic solution, and a tent of the former left in.

25th. The wound has no swelling, only a little oozing serosity from the lower portion; treatment, bathing with cold water.

26th. Cavity doing well; bathed in cold water.

27th. Cavity does not look as well to-day; a little gangrenous spot appears in the center; dressed with the spray of carbolic acid and chloride of zinc.

28th. Cavity looks better; dressed antiseptically.

31st. Cavity looks well; the animal continues in good spirits.

April 1st. Healthy pus is freely discharging. The antiseptic spray was daily applied, and from this time forward, the cavity rapidly filled, and upon the ninth instant the patient was discharged.

14th. The animal was brought to the clinic, and nothing but a slight cicatrix is visible.

VARIETIES AND NEWS.

AMERICAN VETERINARY COLLEGE.

At the suggestion of the Faculty of the American Veterinary College, urged for some time back, the Board of Trustees are considering the propriety of extending the course of lectures and alter the present requirements for graduation at the College.

PRIZE OFFERED BY THE U. S. VETERINARY MEDICAL ASSOCIATION.

Prizes are offered by the association to any of its members for the two best papers on any subject connected with Veterinary Medicine. The papers are to be delivered to the President of the Association before the 15th of July, 1877. They are to be headed with a motto and accompanied with a sealed envelope containing the name of the applicant, and directed with the similar motto heading the paper. The papers are to be read by the committee appointed as judges, and presented to the association at the next meeting.

NEW MEMBERS.

The month of March brings with it the close of the course of lectures of the veterinary schools of the new world, and the issues of diplomas to the successful candidates. The *American Veterinary College* sends out four graduates: W. J. Coates of New York City;

C. H. Hall of New Bedford, Mass.; C. H. Peabody of Waltham, Mass.; G. P. Penniman of Worcester, Mass. The *Montreal Veterinary College* on the 29th of March, granted the degree to seven gentlemen: James R. McLaughlin of Watertown, Mass.; C. C. Lyford of Roscœ, Illinois; D. S. Brown of Genoa, Illinois; John F. Ryan of Montreal, Canada; William B. Hall of Leids, Megantic, P. Q.; Servil Hebert of Napierville, P. Q.; and William Murphy of Boston, Mass.

Out of these eleven new members of the profession, five are from Massachusetts, a fact which shows the appreciation of the veterinary profession in that great state.

The following gentlemen were graduated at the Ontario Veterinary College: Henry Hopkins, Green River, Ontario; M. H. McKillip, Chicago, Illinois; G. W. Bates, Wellington, Mo.; Herbert Hamilton, Toronto, Ontario; M. L. High, Bayham, Ontario; R. W. Newton, Bulwille, Ontario; E. Kenning, Elmira, Ontario; W. Langtry, Bronte, Ontario; M. Stalker, Ames, Iowa; E. S. Rogers, Bradford, Ontario; D. Stovel, Mt. Forrest, Ontario; R. A. Harding, Kingston, Jamaica.

WONDERFUL COWS.

Among the biggest of big stories is that of a cow, native bred nine years old, kept in Vermont, which yielded in 12 months 633 lbs. of butter. Her feed was pasture in the summer, and in winter 20 lbs. of hay and 8 quarts of potatoes. This is not very good feed, and yet another cow, not so well kept, owned by the same person, produced 504 lbs. in 12 months. And besides this we read of a short horn cow in Kansas, which produced a calf when *eleven* months old. Without saying this is impossible, it is safe to say it is within two months of it. (*American Agriculturist.*)

PRESERVING ANATOMICAL SPECIMENS.

For rapidly preparing bones and ligaments for museum purposes, Dr. L. Frederick recommends that, after the soft parts, except the ligaments have been removed, the preparation should be washed, dehydrated by alcohol and then plunged into spirit of turpentine. After two or three days maceration in this fluid, the skeleton is placed

in the position in which it is designed to keep it and dried in the air. In drying the bones and ligaments become beautifully white and the whiteness increases as time passes, the same process gives less satisfactory results for muscles. For a parenchymatous organ, on removing it from the turpentine bath, Dr. F. plunges it into melted wax or paraffin during half an hour to two hours, till the bubbles of turpentine have ceased to pass off. When withdrawn and cooled, the piece resembles a wax model, but it is far superior in its minor details; the colour of the organ persists. (*Vet. Journal.*)

DEATH OF A VALUABLE SHORT HORN.

The Earl of Bective has had the misfortune to lose by *tuberculosis* the famous short horn cow, Tenth Dutchess of Geneva, which was purchased by his lordship at the New York mills sale U. S. in 1873, for over 6,000 guineas. The dutchess has left of her breed one bull and three heifers, the youngest of which is stated to be especially worthy of the handsome dam. (*Veterinarian.*)

UNCOMMON CESAREAN OPERATION.

An unusual and interesting case of obstetrical surgery came to us from Florida. A physician states that having shot a large female shark, on opening her abdomen and uterus was rather taken back at the sight of four little ones, which freed of their respective placenta, run off into the ocean, on the shores of which lay their dead mother.

REPORT OF VETERINAY SOCIETY.

COMITIA MINORA OF U. S. VETERINARY MEDICAL ASSOCIATION.

A Special Meeting of the Committee Minora of the U. S. Veterinary Medical Society, was held at the Massasoit House, Springfield, Mass., April 20th. The Vice President. Dr. Theo. S. Very of Boston in the chair.

MEMBERS PRESENT:

Robert Wood, Lowell, Mass.
J. H. Stickney, Boston, "
Alexander Lockhart, New York.
James L. Robertson, "
Charles P. Lyman, Springfield, Mass.

It was voted that the appointment of Dr. E. Lewis Sturtevant of South Framingham be asked of the president as U. S. Commissioners of Agriculture.

2d. That a memorial to this effect be presented to the President of the United States for his kind consideration.

3d. That the memorial as read to the meeting be accepted, signed, sealed and forwarded.

4th. That the meeting be adjourned.

C. P. LYMAN, Cor. Sec'y.

CORRESPONDENCE.

VARIOLA EQUINA—HORSE POX.

BY W. BOYDEN, V. S. BOSTON.

On the 7th of March last, I was called professionally to the stock farm of Messrs. Moulton Bros., West Randolph, Vermont, a *distemper* having broken out among their fine stock of young horses. The history given me of it was as follows: "In the early part of February they had to buy hay, and attached to one of the loads hauled into their yard was a horse suffering from a disease apparently of a catarhal nature. A few days after the visit of this animal the yearlings began to show symptoms of a kind of distemper characterized by discharge from the nostrils and in some cases sore throat; but little notice was taken of it except to use a little more care in protecting them from inclement weather. About the end of February and beginning of March, the two year olds began to show similar symptoms, in some cases of a much more complicated and alarming nature. The first animal shown me on my arrival at their farm was a magnificent looking Hamiltonian two year old entire colt, he had been ailing over a

week, and his appearance when first seen by me was as follows ; Pulse 65, eyes bright but conjunctiva very red, mouth hot and red but moist, nostrils very red with bright red crusts adhering to the septum, in some respects resembling the ulceration in glanders only that its color was different, and the sores apparently not so deep; the intermaxillary glands were also tumified somewhat as in glanders and quiet firmly set in the bone. The skin was covered with a pustular eruption discreet everywhere excepting between the thighs and below the knees and hocks where they were confluent, the limbs being stiff, painful and considerably swollen. The pustules were very numerous on the lips and nose, where there was no hair, and also on the sheath, the tops of many had fallen off leaving a bright red umbilicated projection, others contained bloody pus, they varied in size, the average being as large as peas—the lower part of the limbs looked very bad, in addition to the swelling, lymph had exuded and glued the hair together giving the appearance of *grease*. His bowels were constipated and he moved with difficulty, but his appetite remained very good, this was by far the worst case. In about a dozen others all the above symptoms were present except the eruption on the skin, on three others a few pustules were found. In two, strangle abscesses formed in the intermaxillary space. Professor McEachran of the Montreal Veterinary College had a short time personally written to me that variola equina prevailed among the horses there; I immediately became convinced that this was the same disease.

In answer to a telegram, I again visited them on the 21st, and found several new cases, but all were doing well with the exception of the first, large abscesses had formed on or just above the fetlocks of all of his legs, and also on his sheath from which much creamy pus was discharged leaving sores as large as the palm of a man's hand; the limbs were much disfigured, and he will probably carry the scars through life, the pox marks were gradually assuming a greyish appearance and drying up, so that but little trace of them will be left excepting on the lips and sheath. Mr. Fleming in his manual of Veterinary Science and Police, remarks the similarity of some of the symptoms to those of glanders and farcy which renders mistakes in diagnosis liable to occur, this was precisely my experience in examining the first and worst case. I rather hesitated before pronouncing it horse pox, feeling that it might possibly turn out a bad case of glanders and farcy. The stock having been so generally exposed I did not separate them,

but cleaned and disinfected the stalls and pens, cut down their feed and gave acidulated drinks in the mild cases, the worst cases were kept on tonics and their sores dressed with carbolic acid in solution. As this disease is somewhat rare the rather poor description I have given of it, may possibly interest some of your readers.

W. BRYDEN.

CEREBRO-SPINAL-MENINGITIS.

NEW YORK, *April* 19, 1877.

Messrs. EDITORS :—

Professor Large in his article on Cerebro-Spinal-Meningitis published in the last number of the *American Veterinary Review*, misuses, perhaps inadvertently, the terms "Endemic" and "Epidemic." Reverting to their origin we find the term "Epidemic" derived from the Greek "demos," meaning the *people*, and "epi" from the same source, signifying "upon"; hence an "Epidemic" can only be a disease affecting *humanity*.

The term "Endemic" is similar in its origin, the prefix limiting the disease to a prescribed locality, and cannot be applied to other than diseases affecting the *people*.

But, on the other hand, there are two terms of like meaning, applicable to diseases affecting the brute creation, and these are "Epizootic" for such diseases as spread over a large extent of territory, and "Enzootic" for those confined to a certain locality.

These terms are of Greek origin, "Zoon" meaning an animal.

Now, as regards the prophylactic virtues of Belladonna in "Cerebro-Spinal-Meningitis," although it may be a prophylactic, still I do not think the facts of the recent outbreak in Brooklyn will support this view of its desirable influence. I find by a reference to the article in question that over sixty per cent. of the animals in the stable were *attacked*.

Certainly this is as heavy a percentage as is often seen under any circumstances, yet we are told that until the ventilation was effective, from ten to fifteen new cases occurred every day, in spite of the administration of Belladonna, and that three or four new cases occurred even after the removal of the less than forty per cent of unattacked animals to quarters more or less remote from the immediate locality of

infection. Now, if Belladonna is a prophylactic in this disease, we should have expected it to reduce the average number of animals daily attacked, while subjected to the influence of the poison; yet such is *not* the fact.

Lastly, the percentage of deaths (over fifty) seems to me to be fully as great as could be expected, while I think it questionable whether good ventilation had not much more to do with the reduction in number and severity of the cases than Belladonna had.

Yours, respectfully,

L. L.

LETTERS AND COMMUNICATIONS RECEIVED.

W. Bryden, Boston, Mass. L. L., New York. L. T. Bell, Brooklyn. Theo. S. Very, Boston. Prof. McEachran, Montreal. W. Gadsden, M. R. C. V. S., Philadelphia. C. H. Peabody, Waltham, Mass. Surgeon's General Office, Washington, E. Mink, Rochester. A. Large, Brooklyn.

EXCHANGE.

Hospital Gazette, N. Y. Medical Record, N. Y. Country Gentleman, N. Y. American Agriculturist, N. Y. Scientific Farmer, Boston. Dumb Animals, Boston. National Live Stock Journal, Chicago.

SPECIMENS.

SENT FOR THE MUSEUM OF THE AMERICAN VETERINARY COLLEGE.

21. Ankylosed Phalanges,.....C. P. Lyman, M.R.C.V.S.
22. Diseased Teeth,.....Washburn, V. S.
23. 24. Intestinal Calculi,.....J. Cattanach, V. S.
25. Urinary do. ..... do.
26. French Canadian Shoe,.....J. L. Robertson, M. D. V. S.
27. Piece of Necrosed Bone from the Ischium,....L. T. Bell, D.V.S.
28. Diseased Molar,.....J. D. Hopkins, D.V.S.
29. Bones of Fœtal Head of Horse,.....J. S. Saunders, D.V.S.

30. Necrosed Lower Maxillary Bone,.....Theo. Very. V. S.
31. Ankylosed of Entire Hock,..... do.
32. Bandage for Forced Extention of Knee Joint,..Jh. T. Hahn, Esq.
33. Body of 17th Dorsal Vertebræ, (fracture) A. A. Holcombe, D.V.S.
34. Exostosis of 1st and 2d Phalanges (horse) do.
35. Fract. of os coronet and Exostosis of all plalanges, do.
36. Head—Osteo Porosis,.....Theo. Very, V. S.
37. Digital Region, with Breaking Down, Periostitis and Necrosis, ...W. Rose, V. S.
38. Complete Ankylosis of Whole Hock, Ruminant, W. H. Armstrong, V.S.
39. Crusta Petrosa from Upper Jaw,..... do.
40 to 50. Bones of Anterior Extremity with centers of ossification,..... do.
51. Keraphylocele,.....J. L. Robertson, M.D.V.S.
52. Breaking down of Flexor Tendons,....L. Plageman, M.R.C.V.S
53. Running Plate on a foot,.....C. W. Crowley, D.V.S.
54. Running Shoe,..... do.
55. Supplementary finger from a colt,.....R. Wood, V. S. This was reported in American Veterinary Review of April, 1877
56. Odontomatous Tumour, do.
57. Fractured Rib united with adhesion of the pleura, C. P. Lyman, M. R. C. V. S.
58. 59. Ring Bones,.....J. F. Winchester, S. B.
60. 61. Occulte Spavin,..... do.
62. Ulcerative arthritis of the hock,..... do.
63. Spavin,..... do.
64. Carious os Pedis right and left, sequella of chronic laminitis, J. F. Winchester, S. B.
65. Side Bones,.....J. F. Winchester, S. B.
66. Osteitis Metacarpal Bone,..... do.
67. Side Bones,..... do.
68. Hoof torn from the foot of a colt, A. Large, M. D., M.R.C.V.S.L. (See American Veterinary Review, April, 1877.)

(*To be Continued.*)